

ABSTRACT OF THE DISCLOSURE

A conveying device with peristaltic movement includes a flexible transport tube and a two-way shape memory alloy. The two-way shape memory alloy is mounted on the surface of the transport tube. When the two-way shape memory alloy is electrically conducted and heated, the cross-sectional area of transport path in the flexible transport tube contracts by the contractive force resulting therefrom. When electrically conducting and heating the two-way shape memory alloy is terminated, the original cross-sectional area of transport path in the flexible transport tube is restored by the recovery force thereof. The position of the flexible transport tube at which the contraction and the restoration are applied to is sequentially moved in a predetermined direction by a temperature controlling device, so as to convey an object within the flexible transport tube in the predetermined direction.